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**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/555,578 07/26/00 KURIYAMA

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EXAMINER

EGAN, B

ART UNIT

PAPER NUMBER

1772

DATE MAILED:

11/08/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No.

09/555,578

Applicant(s)

KURIYAMA ET AL.

Examiner

Brian P. Egan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it contains two separate paragraphs.

The abstract is also objected to because the final sentence (lines 9-12) is confusing and indecipherable. Correction is required. See MPEP § 608.01(b).

### *Claim Objections*

3. Claims 1, 2, and 7-12 are objected to because of the following informalities.

Claims 1 and 8 are objected to for the use of the phrase "characterized in." Examiner suggests the use of the phrase "wherein" instead to facilitate clarity.

Claim 2 is objected to for the use of the term "water-solubility." Examiner suggests the use of "water-soluble" to facilitate clarity.

Claims 7 and 9-12 are objected to for the use of the term "according to *the* claim (1 or 8)." Examiner suggests omitting 'the' and using the term "according to claim (1 or 8)" to facilitate clarity.

Claim 8 is objected to because of an unclear statement in lines 8-11 of the claim. It is written, "Whereby said tack label is easy to peel from the container body under an environment

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with hot water while *easy* to peel from a container body under a processing environment with the normal temperature water.” The statement is unclear. Examiner infers that the word ‘difficult’ or a synonym thereof was intended to be used in place of ‘easy’ in the statement “easy to peel from a container body... with the normal temperature water.”

Claim 10 is objected to for the statement in lines 2-3 of the claim, “and only of a part of the tack label.” Examiner suggests omitting ‘of’ to facilitate clarity.

Appropriate corrections are required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, for failing to enable any person skilled in the art to carry out the invention. Lines 3-4 of the claim are unclear as to how the label is treated in the 40 degrees water. It is unclear if the statement, “while said tack label is not peeled from the container body... after the container is immersed in 40°C water” means that the label is left on the plastic bottle without attempting to remove it, or if there is an attempt at removing the label but the lack of a warm temperature prevents the label from being peeled off. If the latter is the case, the use of the term “while said tack label is not *easily* peeled” is suggested to facilitate clarity.

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5. Claims 1 and 8 are rejected under 35 U.S.C. 112, second paragraph, for the use of the term, "sheet-like." The use of the aforementioned terminology is indefinite. Clarification and/or correction is required.

6. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, for failing to provide a proper antecedent basis. Line 1 of claim 4 refers to "said masking layer" according to claim 2. There is no mention of a masking layer in claim two or any claims prior to claim two.

7. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, for failing to provide a proper antecedent basis. Line 7 of claim 8 refers to "the property which is difficult to dissolve in water." There is a lack of antecedent basis to *the property*. The independent claim 8 makes no mention of such property prior to line 7.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2, 8, and 9 are rejected under 35 U.S.C. 103(a) for being unpatentable over Harada et al. (5,096,767) in view of Japanese Patent #05230427.

Harada et al. discloses a multi-layered label for bottles comprising a base material (Fig. 2, #4), a printing layer formed on a first surface of the label base material (Fig. 2, #7), and an adhesive layer formed on a second surface which opposes the first surface of the label base material (Fig. 2, #9). Harada et al. also teach a label that is alkali soluble at elevated temperature

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(Col. 3 lines 21-30). Harada et al. fail to teach a hot water soluble adhesive (that is also difficult to dissolve at normal temperature), wherein said adhesive is an acrylic water-soluble adhesive, and a plastic container with a label comprising the aforementioned properties.

However, Japanese patent (JP 0523427) teaches an adhesive label for labeling a recyclable bottle (Page 4 Lines 44-49) comprising an acrylic (Page 3 Lines 41-43) water-soluble adhesive (Page 5 Lines 19-29) for the purpose of creating a label whose adhesive layer is easily dissolved in water at a high temperature and hard to remove at a normal temperature. The label, because of the temperature dependant properties of the acrylic water-soluble adhesive, peels easily from the disclosed plastic bottle at 70°C and maintains its adhesive and waterproof properties at 10°C (Page 5 Lines 19-29).

It would have been obvious to one of ordinary skill in the art at the time applicants invention was made to have modified Harada et al. with an acrylic water-soluble adhesive that is soluble at high temperatures but difficult to remove at normal temperature along with a plastic bottle to adhere said label to as taught by Japanese patent (JP 0523427) in order to have a label and bottle that are ideal for a hot-water based recycling process such that the said label is easily removable from the said bottle at a high temperature but difficult to remove at a normal temperature.

Both Harada et al. and Japanese patent (JP 0523427) use alkali solutions to dissolve the non water-soluble components of a label in a recycling process. But Japanese patent (JP 0523427) also uses hot water to dissolve the acrylic water-soluble adhesive layer. It would have been obvious to one of ordinary skill in the art at the time applicants invention was made to have

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modified Harada et al. by adding hot water to the dissolution step in order to dissolve the hot water soluble adhesive in a recycling process as taught by Japanese patent (JP 0523427).

It would also have been obvious to one of ordinary skill in the art at the time applicants invention was made to have modified Harada et al. to include a plastic container as taught by Japanese patent (JP 0523427) in order to have a recyclable container made of a material that helps ease the removal of the label. Japanese patent (JP 0523427) suggests the use of polyester or similar plastic materials (Page 4 Lines 44-47) for the formation of the said plastic container. Polyester and similar plastic materials constrict when heated, therefore helping in the process of removing the label.

9. Claims 3-6 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable under Harada et al. in view of Japanese patent (JP 0523427) as applied above, further in view of Ichinose et al. (4,269,321), and further in view of Preuss (6,023,865). Harada et al. and Japanese patent (JP 0523427) fail to teach the use of a masking layer and ring shaped adhesive.

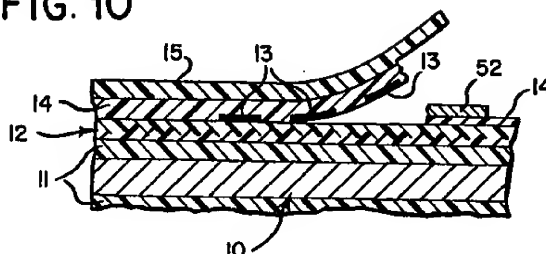
However, Ichinose et al. teach the use of the masking layer (Col. 16 Lines 25-34 and Figure 10). Ichinose et al. use a masking layer to help make the peeling process more efficient by limiting the amount of adhesion on the label.

It would have been obvious to one of ordinary skill in the art at the time applicants invention was made to have modified Harada et al. to include a masking layer as taught by Ichinose et al. in order to limit the amount of adhesion there is between the label and the bottle, in turn limiting the amount of adhesive material needed to be removed from the bottle during a recycling process. Observation of Figure 10 in Ichinose shows the masking layer to constitute at

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least 5% of the surface area of the adhesive layer (#52 is the masking layer, #14 is the adhesive layer).

FIG. 10



Therefore, it would also have been obvious to one of ordinary skill in the art at the time applicants invention was made to have modified Harada et al. by covering at least 5% of the adhesive layer with a masking layer as taught by Ichinose et al. and ultimately place the masking layer throughout the majority of the label, including the central part and part of the edge of the adhesive layer, only leaving the perimeter of the label adhesive.

Preuss teaches the use of a ring-shaped adhesive layer (Col. 4 lines 12-13) about the perimeter of the label, where there is a non-adhesive layer (Fig. 1 #14) throughout the majority of the label, including the central part and part of the edge of the adhesive. The bottle label that Preuss claims is one that is to be affixed to the bottom of a bottle (Fig. 2 #28) such that the label is difficult to be damaged or peeled off (Col. 1 Lines 18-31) by placing an adhesive ring (Col. 4 lines 12-13) on the perimeter edge of the label (Fig. 1 #12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have modified Harada et al. with a ring-shaped adhesive layer as taught by Preuss in order to provide a label that maintains a significant adhesive power to prevent peeling and other damage from general contact with the label. The ring-shaped adhesive also allows for a sufficient amount of



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adhesion at normal temperature and limits the time needed to peel the label at a high temperature from the bottle because there is only a small area of adhesion actually affixed to the bottle.

10. Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable under Harada et al. in view of Japanese patent (JP 0523427) as applied above, and further in view of Fujii (JP 410316819A). Harada et al. and Kuraray teach the label and bottle detailed in claims 1 and 8, but fail to clearly specify a base material with a specific gravity that is less than one.

Fujii teaches an adhesive sheet with a base material made of soft vinyl chloride resin (Page 1 Lines 13-15). The soft vinyl chloride resin is compounded with a plasticizer, and the resulting compound has a specific gravity between 0.05 and 0.5 (Page 1 Lines 21-28).

It would have been obvious to one of ordinary skill in the art at the time applicants invention was made to have modified Harada et al. with a vinyl chloride resin base material with a specific gravity less than one as taught by Fujii in order to have a base material that is light in weight and is excellent in workability (Page 1 Lines 33-34). Also, a base material with a specific gravity less than one allows the non-soluble portion of the label to float on the top layer of the water during recycling operations. This eases the separation step and is a notoriously well-known practice to one of ordinary skill in the art. Further, by collecting the non water-soluble portions of the label, they can easily be placed in the alkali solutions proposed by Harada et al. and Japanese patent (JP 0523427) that will dissolve the remaining portions of the label.

### *Conclusion*

11. The Kuraray and Fujii materials were reformatted from their original format to allow for easier location of material. The reformatted material has been attached to the office action.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3599 for regular communications and 703-301-9999 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

BPE  
November 2, 2001

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER

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11/2/01